



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Peter Crane	Group Art Unit: 2652 Examiner: Tupper, Robert S.
Appln. No.	: 10/051,366	
Filed	: January 18, 2002	
Title	: MOVING COIL MICRO ACTUATOR WITH REDUCED ROTOR MASS	
Docket No.	: I69.12-0514	

CA  
8-503  
~~8-503~~  
H11

**COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE**

Mail Stop Issue Fee  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**SENT VIA EXPRESS MAIL**  
Express Mail No.: EV 004176569 US

Sir:

Applicant disagrees with the Statement of Reasons for Allowance. The Statement of Reasons for Allowance indicate that the term microactuator be read in light of the disclosure as being a voice coil motor. As shown in FIGS. 1 and 2 and discussed in the specification, the voice coil motor (VCM) and the microactuator are two separate structures. VCM, or the main actuator, is arranged to rotate an actuation arm on a spindle around an axis. A load beam is connected to the actuator arm and a gimbal is connected to an end of the load beam. A microactuator positions the slider with respect to the gimbal. The microactuator is attached to the gimbal and carries the slider.

As discussed at page 5, lines 3-10, the VCM coarsely positions the slider by moving the actuator arm and the microactuator finely positions the slider by generating a force which causes bending of the beam springs located on the microactuator resulting in the portion of the microactuator carrying the slider moving slightly with respect to the gimbal.

Inventor: Peter Crane

Application No.: 10/051,366

-2-

Thus, Applicant disagrees with Examiner's statement that the term microactuator is read in light of the disclosure as being a voice coil motor. The voice coil motor and the microactuator are separate actuators which coarsely and finely, respectively, position the slider. Applicant respectfully requests that these comments be entered in the application file.

Respectfully submitted,

KINNEY & LANGE, P.A.

Date: 7/1/03

By: Gayle A. Bush  
Gayle A. Bush, Reg. No. 52,677  
THE KINNEY & LANGE BUILDING  
312 South Third Street  
Minneapolis, MN 55415-1002  
Telephone: (612) 339-1863  
Fax: (612) 339-6580

GAB:amh

# ART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**Alexandria, Virginia 22313-1450**  
**Fax (703)746-4000**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

**CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)**

00164 7590 05/29/2003

KINNEY & LANGE, P.A.  
 THE KINNEY & LANGE BUILDING  
 312 SOUTH THIRD STREET  
 MINNEAPOLIS, MN 55415-1002



**Note:** A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

**Certificate of Mailing or Transmission**

**SENT VIA EXPRESS MAIL**  
**LABEL NO.: EV 004176569 US**

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,366	01/18/2002	Peter Crane	169.12-0514	6952

**TITLE OF INVENTION:** MOVING COIL MICRO ACTUATOR WITH REDUCED ROTOR MASS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1300	\$300	\$1600	08/29/2003

EXAMINER	ART UNIT	CLASS-SUBCLASS
TUPPER, ROBERT S	2652	360-294500

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

Kinney & Lange, P.A.

2 \_\_\_\_\_  
 3 \_\_\_\_\_

## 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

**PLEASE NOTE:** Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

Seagate Technology LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Scotts Valley, CA

Please check the appropriate assignee category or categories (will not be printed on the patent) ☐ individual ☒ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:

☒ Issue Fee

☐ Publication Fee

☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s):

☒ A check in the amount of the fee(s) is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☒ The Commissioner is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number 11-0582 (enclose an extra copy of this form).

Commissioner for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)

*[Signature]*

(Date)

7/1/03

**NOTE:** The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

07/07/2003 ENRILE2 00000053 10051366

01 FE:1501  
 02 FE:1504

1300.00 OP  
 300.00 OP

TRANSMIT THIS FORM WITH FEE(S)



B

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named

Inventor : Peter Crane

Appln. No. : 10/051,366

Filed : January 18, 2002

Title : MOVING COIL MICRO ACTUATOR  
WITH REDUCED ROTOR MASS

Docket No. : I69.12-0514

Group Art Unit: 2652

Examiner: Tupper,  
Robert S.

**EXPRESS MAIL COVER SHEET**

Mail Stop Issue Fee

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**SENT VIA EXPRESS MAIL**

Express Mail No.: EV 004176569 US

Sir:

The following papers are being transmitted via **EXPRESS MAIL** to the U.S. Patent and Trademark Office on the date shown below:

1. Postcard
2. Check for \$1,600.00
3. Fee Transmittal (In duplicate)
4. Part B Fee(s) Transmittal
5. Comments on Statement of Reasons for Allowance

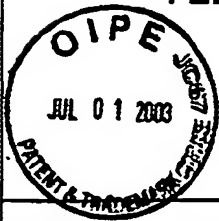
Respectfully submitted,

KINNEY & LANGE, P.A.

Date: 7/1/03

By Gayle A. Bush

Gayle A. Bush, Reg. No. 52,677  
THE KINNEY & LANGE BUILDING  
312 South Third Street  
Minneapolis, MN 55415-1002  
Telephone: (612) 339-1863  
Fax: (612) 339-6580



# FEE TRANSMITTAL

Total Amount of Payment \$1,600.00

## METHOD OF PAYMENT (Check One)

1. ☒ The Commissioner is hereby authorized to charge any additional fee required under 37 C.F.R. 1.16 and 1.17 and credit any over payments to Deposit Account No. 11-0982. Deposit Account Name: Kinney & Lange, P.A. A duplicate copy of this communication is enclosed

2. ☒ Check Enclosed

## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1001	750	2001	375	[ ] Utility Filing Fee
1006	330	2006	165	[ ] Design Filing Fee
1004	750	2004	375	[ ] Reissue Filing Fee
1005	160	2005	80	[ ] Prov. Filing Fee

Subtotal (1) \$-0-

### 2. EXTRA CLAIM FEES

	Number Claims	Prior	Extra	Fee from Below	Fee Paid
Total	-	-	X	-	-
Indep.	-	-	X	-	-
Multiple Dependent Claims				-	-

Insert 3 and 20, or number previously paid if greater; Reissue see below

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Description
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple Dependent Claim
1204	84	2204	42	Reissue Independent Claims Over Original Patent
1205	18	2205	9	Reissue claims in excess of 20 and over original patent

Subtotal (2) \$-0-

## Complete if Known

Application No.	10/000,366
Filing Date	January 18, 2002
First Named Inventor	Peter Crane
Group Art Unit	2652
Examiner Name	Tupper, Robert S.
Atty. Docket Number	169.12-0514

## FEE CALCULATION (Continued)

### 3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee paid
1051	130	2051	65	Surcharge - Late filing fee or oath	-
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	-
1053	130	1053	130	Non-English specification	-
1812	2,520	1812	2,520	For Filing a Request for Reexamination	-
1251	110	2251	55	Extension for reply within first month	-
1252	410	2252	205	Extension for reply within second month	-
1253	930	2253	465	Extension for reply within third month	-
1254	1,450	2254	725	Extension for reply within fourth month	-
1255	1,970	2255	985	Extension for reply within fifth month	-
1402	320	2402	160	Filing a brief in support of an appeal	-
1403	280	2403	140	Request for oral hearing	-
1814	110	2814	55	Terminal Disclaimer Fee	-
1452	110	2452	55	Petition to revive - unavoidable	-
1453	1,300	2453	650	Petition to revive - unintentional	-
1501	1,300	2501	650	Utility/Reissue issue fee	1300
1502	470	2502	235	Design issue fee	-
1460	130	1460	130	Petitions to the Commissioner	-
1807	50	1807	50	Petitions related to provisional applications	-
1806	180	1806	180	Submission of Information Disclosure Statement	-
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	-
1801	750	2801	375	Request for Continued Examination (RCE)	-

Other fee (specify) Publication Fee

300

Subtotal (3) \$1,600.00

Signature

*Gayle A. Bush*  
Gayle A. Bush

Reg. No.

52,677

Date

7/1/03

Deposit Account No.

11-0982